Ø 010

Official



IN THE CLAIMS

Please add new claims 32-43.

Claims 1-31 are re-presented.

PENDING CLAIMS

- 1. A method comprising:
- identifying where at least two digital images overlap at a first resolution level;
 dividing each of the at least two digital images into a plurality of areas at a second resolution level higher than the first resolution level; and

identifying where overlapping ones of the areas at the second resolution level overlap.

- 2. The method of claim 1, wherein each of the at least two digital images are stored at the first and second resolution levels.
- 3. The method of claim 1, wherein the method comprises:

storing the at least two digital images at the first resolution level in memory to identify where the at least two digital images overlap at the first resolution level;

purging the memory of the at least two digital images at the first resolution level; and storing the overlapping areas at the second resolution level in the memory to identify where the overlapping areas at the second resolution level overlap.

- 4. The method of claim 1, wherein the identifying where the at least two digital images overlap at the first resolution level and the identifying where overlapping ones of the areas at the second resolution level overlap each comprise using an edge detection technique.
- 5. The method of claim 1, wherein the identifying where the at least two digital images overlap at the first resolution level comprises identifying coordinates where the at least two digital images at the first resolution level overlap; and

wherein the identifying where overlapping ones of the areas at the second resolution level overlap comprises identifying the overlapping areas based on the identified coordinates.

- 6. The method of claim 1, comprising:

 combining the at least two digital images.
- 7. The method of claim 1, comprising:

 identifying where the at least two digital images overlap at one or more resolution levels
 higher than the second resolution level.
- 8. The method of claim 1, comprising:

 identifying where another set of at least two digital images overlap at the first resolution level;

dividing each image of the other set of at least two digital images into a plurality of areas at the second resolution level;

identifying where overlapping ones of the areas of the other set of at least two digital images at the second resolution level overlap; and combining the digital images.

A computer readable medium having instructions that, when executed by a computer, 9. perform a method comprising:

identifying where at least two digital images overlap at a first resolution level; dividing each of the at least two digital images into a plurality of areas at a second resolution level higher than the first resolution level; and identifying where overlapping ones of the areas at the second resolution level overlap.

- The computer readable medium of claim 9, wherein each of the at least two digital 10. images are stored at the first and second resolution levels.
- The computer readable medium of claim 9, wherein the method comprises: 11. storing the at least two digital images at the first resolution level in memory to identify where the at least two digital images overlap at the first resolution level;

purging the memory of the at least two digital images at the first resolution level; and storing the overlapping areas at the second resolution level in the memory to identify where the overlapping areas at the second resolution level overlap.

- 12. The computer readable medium of claim 9, wherein the identifying where the at least two digital images overlap at the first resolution level and the identifying where overlapping ones of the areas at the second resolution level overlap each comprise using an edge detection technique.
- 13. The computer readable medium of claim 9, wherein the identifying where the at least two digital images overlap at the first resolution level comprises identifying coordinates where the at least two digital images at the first resolution level overlap; and

wherein the identifying where overlapping ones of the areas at the second resolution level overlap comprises identifying the overlapping areas based on the identified coordinates.

- 14. The computer readable medium of claim 9, wherein the method comprises combining the at least two digital images.
- 15. The computer readable medium of claim 9, wherein the method comprises identifying where the at least two digital images overlap at one or more resolution levels higher than the second resolution level.
- 16. The computer readable medium of claim 9, wherein the method comprises:

 identifying where another set of at least two digital images overlap at the first resolution level;

dividing each image of the other set of at least two digital images into a plurality of areas at the second resolution level;

Ø1014

→ TECHNOLOGY CTR

identifying where overlapping ones of the areas of the other set of at least two digital images at the second resolution level overlap; and combining the digital images.

- A computer system comprising: 17.
 - one or more processors; and (a)
- a computer readable medium to store instructions that, when executed by the one (b) or more processors, perform:
- identifying where at least two digital images overlap at a first resolution (i) level,
- dividing each of the at least two digital images into a plurality of areas at a (ii) second resolution level higher than the first resolution level, and
- identifying where overlapping ones of the areas at the second resolution (iii) level overlap.
- The computer system of claim 17, comprising a computer readable medium to store each of the at least two digital images at the first and second resolution levels.
- The computer system of claim 17, comprising memory, the computer readable medium to 19. store instructions that, when executed by the one or more processors, perform:

storing the at least two digital images at the first resolution level in the memory to identify where the at least two digital images overlap at the first resolution level,

purging the memory of the at least two digital images at the first resolution level, and storing the overlapping areas at the second resolution level in the memory to identify where the overlapping areas at the second resolution level overlap.

- The computer system of claim 17, wherein the identifying where the at least two digital 20. images overlap at the first resolution level and the identifying where overlapping ones of the areas at the second resolution level overlap each comprise using an edge detection technique.
- The computer system of claim 17, wherein the identifying where the at least two digital 21. images overlap at the first resolution level comprises identifying coordinates where the at least two digital images at the first resolution level overlap; and

wherein the identifying where overlapping ones of the areas at the second resolution level overlap comprises identifying the overlapping areas based on the identified coordinates.

- The computer system of claim 17, the computer readable medium to store instructions 22. that, when executed by the one or more processors, perform combining the at least two digital images.
- 23. The computer system of claim 17, the computer readable medium to store instructions that, when executed by the one or more processors, perform identifying where the at least two digital images overlap at one or more resolution levels higher than the second resolution level.

The computer system of claim 17, the computer readable medium to store instructions 24. that, when executed by the one or more processors, perform:

identifying where another set of at least two digital images overlap at the first resolution level,

dividing each image of the other set of at least two digital images into a plurality of areas at the second resolution level,

identifying where overlapping ones of the areas of the other set of at least two digital images at the second resolution level overlap, and combining the digital images.

A computer system comprising: 25.

means for identifying where at least two digital images overlap at a first resolution level; means for dividing each of the at least two digital images into a plurality of areas at a second resolution level higher than the first resolution level; and

means for identifying where overlapping ones of the areas at the second resolution level overlap.

The computer system of claim 25, comprising: 26.

means for storing the at least two digital images at the first resolution level in memory to identify where the at least two digital images overlap at the first resolution level;

means for purging the memory of the at least two digital images at the first resolution level; and

Ø 017

means for storing the overlapping areas at the second resolution level in the memory to identify where the overlapping areas at the second resolution level overlap.

- 27. The computer system of claim 25, comprising:
 means for combining the at least two digital images.
- 28. The method of claim 1, wherein the dividing comprises dividing each of the at least two digital images at the second resolution level into a plurality of tiles each having a size less than a threshold size.
- 29. The computer readable medium of claim 9, wherein the dividing comprises dividing each of the at least two digital images at the second resolution level into a plurality of tiles each having a size less than a threshold size.
- 30. The computer system of claim 17, wherein the dividing comprises dividing each of the at least two digital images at the second resolution level into a plurality of tiles each having a size less than a threshold size.
- 31. The computer system of claim 25, wherein the dividing means comprises means for dividing each of the at least two digital images at the second resolution level into a plurality of tiles each having a size less than a threshold size.

(New) A method comprising:

dentifying where at least two digital images overlap at a first resolution level;

dividing each of the at least two digital images into a plurality of areas at a second resolution level higher than the first resolution level;

identifying overlapping ones of the areas at the second resolution level based on where the at least two digital images overlap at the first resolution level;

identifying where the overlapping ones of the areas at the second resolution level overlap; dividing each of the at least two digital images into a plurality of areas at a third resolution level higher than the second resolution level;

identifying overlapping ones of the areas at the third resolution level based on where the overlapping ones of the areas at the second resolution level overlap;

identifying where the overlapping ones of the areas at the third resolution level overlap; and

combining the at least two digital images.

(New) The method of claim 32, wherein the dividing each of the at least two digital 33. images into a plurality of areas at the second resolution level comprises dividing each of the at least two digital images at the second resolution level into a plurality of tiles each having a size less than a threshold size; and

wherein the dividing each of the at least two digital images into a plurality of areas at the third resolution level comprises dividing each of the at least two digital images at the third resolution level into a plurality of tiles each having a size less than the threshold size.

Page 10 of 19

U.S. APPLICATION No. 09/435,940 ATTORNEY'S DOCKET NO. 042390.P5387

- 34. (New) The method of claim 32, wherein each of the at least two digital images are stored at the first, second, and third resolution levels.
- 35. (New) The method of claim 32, wherein the method comprises:

 storing the at least two digital images at the first resolution level in memory to identify
 where the at least two digital images overlap at the first resolution level;

purging the memory of the at least two digital images at the first resolution level; storing the overlapping areas at the second resolution level in the memory to identify where the overlapping areas at the second resolution level overlap;

purging the memory of the overlapping areas at the second resolution level; and storing the overlapping areas at the third resolution level in the memory to identify where the overlapping areas at the third resolution level overlap.

- 36. (New) The method of claim 32, wherein the identifying where the at least two digital images overlap at the first resolution level, the identifying where overlapping ones of the areas at the second resolution level overlap, and the identifying where overlapping ones of the areas at the third resolution level overlap each comprise using an edge detection technique.
- 37. (New) The method of claim 32, wherein the identifying where the at least two digital images overlap at the first resolution level comprises identifying coordinates where the at least two digital images at the first resolution level overlap;

Page 11 of 19

U.S. APPLICATION No. 09/435,940 ATTORNEY'S DOCKET NO. 042390.P5387

wherein the identifying overlapping ones of the areas at the second resolution level comprises identifying the overlapping areas at the second resolution level based on the identified coordinates where the at least two digital images at the first resolution level overlap;

wherein the identifying where the overlapping ones of the areas at the second resolution level overlap comprises identifying coordinates where the overlapping ones of the areas at the second resolution level overlap; and

wherein the identifying overlapping ones of the areas at the third resolution level comprises identifying the overlapping areas at the third resolution level based on the identified coordinates where the overlapping ones of the areas at the second resolution level overlap.

(New) A computer readable medium having instructions that, when executed by a computer, perform a method comprising:

identifying where at least two digital images overlap at a first resolution level; dividing each of the at least two digital images into a plurality of areas at a second resolution level higher than the first resolution level;

identifying overlapping ones of the areas at the second resolution level based on where the at least two digital images overlap at the first resolution level;

identifying where the overlapping ones of the areas at the second resolution level overlap; dividing each of the at least two digital images into a plurality of areas at a third resolution level higher than the second resolution level;

identifying overlapping ones of the areas at the third resolution level based on where the overlapping ones of the areas at the second resolution level overlap;

Page 12 of 19

U.S. APPLICATION NO. 09/435,940 ATTORNEY'S DOCKET NO. 042390.P5387 identifying where the overlapping ones of the areas at the third resolution level overlap; and combining the at least two digital images.

39. (New) The computer readable medium of claim 38, wherein the dividing each of the at least two digital images into a plurality of areas at the second resolution level comprises dividing each of the at least two digital images at the second resolution level into a plurality of tiles each having a size less than a threshold size; and

wherein the dividing each of the at least two digital images into a plurality of areas at the third resolution level comprises dividing each of the at least two digital images at the third resolution level into a plurality of tiles each having a size less than the threshold size.

- 40. (New) The computer readable medium of claim 38, wherein each of the at least two digital images are stored at the first, second, and third resolution levels.
- 41. (New) The computer readable medium of claim 38, wherein the method comprises: storing the at least two digital images at the first resolution level in memory to identify where the at least two digital images overlap at the first resolution level;

purging the memory of the at least two digital images at the first resolution level;
storing the overlapping areas at the second resolution level in the memory to identify
where the overlapping areas at the second resolution level overlap;

purging the memory of the overlapping areas at the second resolution level; and

Page 13 of 19

U.S. APPLICATION NO. 09/435,940 ATTORNEY'S DOCKET NO. 042390.P5387 storing the overlapping areas at the third resolution level in the memory to identify where the overlapping areas at the third resolution level overlap.

- 42. (New) The computer readable medium of claim 38, wherein the identifying where the at least two digital images overlap at the first resolution level, the identifying where overlapping ones of the areas at the second resolution level overlap, and the identifying where overlapping ones of the areas at the third resolution level overlap each comprise using an edge detection technique.
- 43. (New) The computer readable medium of claim 38, wherein the identifying where the at least two digital images overlap at the first resolution level comprises identifying coordinates where the at least two digital images at the first resolution level overlap;

wherein the identifying overlapping ones of the areas at the second resolution level comprises identifying the overlapping areas at the second resolution level based on the identified coordinates where the at least two digital images at the first resolution level overlap;

wherein the identifying where the overlapping ones of the areas at the second resolution level overlap comprises identifying coordinates where the overlapping ones of the areas at the second resolution level overlap; and

wherein the identifying overlapping ones of the areas at the third resolution level comprises identifying the overlapping areas at the third resolution level based on the identified coordinates where the overlapping ones of the areas at the second resolution level overlap.